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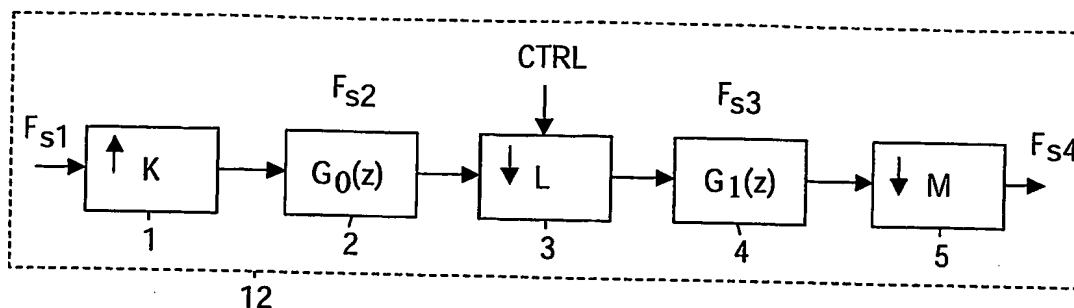
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(54) Title: UP AND DOWN SAMPLE RATE CONVERTER



(57) Abstract: Sample rate converters (12) for converting input sample rates (F_{s1}) of signals into output sample rates (F_{s4}) are provided with sample rate adapters (3,6) for adapting (basic idea) intermediate sample rates (F_{s2}) such that output sample rates (F_{s4}) are larger (upsampling) or smaller (downsampling) than input sample rates (F_{s1}), to reduce their complexity and to avoid bookkeeping and structure switching problems. Sample rate adapters (3,6) in the form of variable sample rate decreaseers (3) allow the sample rate converters (12) to be used in video applications requiring DC-out being equal to DC-in. Sample rate adapters (3,6) in the form of variable sample rate increaseers (6) allow the sample rate converters (12) to be used in audio applications. By locating the sample rate adapter (3,6) between a fixed sample rate increaseer (1) for increasing with a factor K and a fixed sample rate decreaseer (5) for decreasing with a factor M, filters (2,4) in between can be designed independently from the varying factor L as long as K and M are fixed and $L < K$.

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